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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,850	09/22/2003	Yossi Reuven	P-5691-US	4322

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EXAMINER	
TORRES, JUAN A	
ART UNIT	**PAPER NUMBER**
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/664,850	REUVEN, YOSSI	
	Examiner	Art Unit	
	Juan A. Torres	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,6-8,11,12,18,23 and 24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6-8,11,12,18,23 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/24/2007 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 6, 7, 8 and 11 rejected under 35 U.S.C. 102(e) as being anticipated by Dean (US 6833764 B1).

Regarding claim 1, Dean discloses a fractional N synthesizer to output a first output signal having a first frequency on a first output (figure 1 block 140, column 3 line

62 to column 4 line 19); and an integer divider synthesizer coupled to the first output to receive at least a portion of the first output signal to be used as the fundamental frequency of the integer divider synthesizer and to output on a second output a second output signal having a second frequency derived from the first frequency (figure 1 block 150, column 3 line 62 to column 4 line 19) wherein the second frequency is substantially similar to the first frequency (abstract and column 4 lines 30-50).

Regarding claim 6, Dean discloses claim 1, Dean also discloses an oscillator to provide a fundamental frequency to the fractional N synthesizer (figure 1 block 110, column 3 lines 40-44).

Regarding claim 7, Dean discloses claim 6, Dean also discloses a crystal oscillator (figure 1 block 110, column 3 lines 40-44).

Regarding claim 8, Dean discloses outputting by a fractional N synthesizer a first output signal having a first frequency on a first output (figure 1 block 140, column 3 line 62 to column 4 line 19); using the first output signal as a fundamental frequency of an integer divider synthesizer (figure 1 output block 140 input block 150, column 3 line 62 to column 4 line 19); and outputting by the integer divider synthesizer coupled to the first output a second output signal having a second frequency derived from said first output signal on a second output, (figure 1 block 150, column 3 line 62 to column 4 line 19), wherein the frequency of the output signal is substantially similar to the frequency of the input signal (abstract and column 4 lines 30-50).

Regarding claim 11, Dean discloses claim 8, Dean also discloses generating the first output signal and the second output signal from a signal having a fundamental frequency (figure 1 block 110, column 3 lines 40-44).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dean (US 6833764 B1) in view of Kawano (US 6181923 B1).

Regarding claim 12, Dean discloses a first phase locked loop of a fractional N synthesizer to set a first frequency of a first output signal of a first voltage, controlled oscillator to derive said first frequency from an input frequency and provide said first output signal on a first output (figure 1 block 140, column 3 line 62 to column 4 line 19); and a second phase locked loop of an integer divider synthesizer coupled to said first output to receive at least a portion of the output signal of the first voltage controlled oscillator to be used as a fundamental frequency of and second voltage controlled oscillator and to output a second output signal on a second output having a second frequency derived from the first frequency (figure 1 block 150, column 3 line 62 to column 4 line 19), wherein, the frequency of the second output signal is substantially similar to the frequency of the first output signal (abstract and column 4 lines 30-50). Dean doesn't disclose a dual output synthesizer (figure 1 block 3, column 7 lines 32-38)

and a transceiver operably coupled to the dual output synthesizer having first and second mixers operably coupled to the first and second respectively (figure 1 in blocks 1 and 4 blocks 13 and 42, column 7 lines 32-49). Kawano discloses a dual output synthesizer (figure 1 block 3, column 7 lines 32-38) and a transceiver operably coupled to the dual output synthesizer having first and second mixers operably coupled to the first and second respectively (figure 1 in blocks 1 and 4 blocks 13 and 42, column 7 lines 32-49). Dean and Kawano are analogous art because they are from the same field of endeavor of wireless communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the dual synthesizer disclosed by Kawano in the synthesizer disclosed by Dean. The suggestion/motivation for doing so would have been to reduce the price and complexity of the system using only one synthesizer that outputs the received local signal and transmitted local signal (Kawano column 8 lines 50-62).

Claims 18, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dean (US 6833764 B1) in view of Kawano (US 6181923 B1), and further in view of Sadler (US 6011519 A).

Regarding claim 18, Dean discloses a first phase locked loop of a fractional N synthesizer to set a first frequency of a first output signal of a first voltage controlled oscillator to derive said first frequency from an fundamental frequency and to provide said first output signal on a first output (figure 1 block 140, column 3 line 62 to column 4 line 19); a second phase locked loop of an integer divider synthesizer coupled to said first output to receive at least a portion of the first output signal of the first voltage

controlled oscillator to be used as a second fundamental frequency of the second phase locked loop and to control a second voltage controlled oscillator to provide a second output signal on a second output having a second frequency derived from the second fundamental frequency (figure 1 block 150, column 3 line 62 to column 4 line 19), wherein, the frequency of the second output signal is substantially similar to the frequency of the first output signal (abstract and column 4 lines 30-50).Dean doesn't disclose a mobile station having a dual output synthesizer and a transceiver operably coupled to the dual output synthesizer having first and second mixers operably coupled to the first and second respectively. Kawano discloses a mobile station having a dual output synthesizer (figure 1 block 3, column 7 lines 32-38) and a transceiver operably coupled to the dual output synthesizer having first and second mixers operably coupled to the first and second respectively (figure 1 in blocks 1 and 4 blocks 13 and 42, column 7 lines 32-49). Dean and Kawano are analogous art because they are from the same field of endeavor of wireless communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the dual synthesizer disclosed by Kawano in the synthesizer disclosed by Dean. The suggestion/motivation for doing so would have been to reduce the price and complexity of the system using only one synthesizer that outputs the received local signal and transmitted local signal (Kawano column 8 lines 50-62). Dean and Kawano don't disclose that the antennas are dipole antenna. Sadler discloses the use of two dipole antennas (abstract and figure 3 column 3 lines 46-52). Kawano, Dean and Sadler are analogous art because they are from the same field of endeavor of wireless communications. At the time of the

invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the system disclosed by Dean and Kawano the dipole antenna disclosed by Sadler. The suggestion/motivation for doing so would have been to use the system in a mobile terminal at a reduce cost (Sadler abstract).

Regarding claim 23, Kawano, Dean and Sadler disclose claim 18, Kawano also discloses a base station of a cellular communication system (figure 1, column 8 lines 35-62). Dean and Kawano are analogous art because they are from the same field of endeavor of phase locked loops. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate the mobile base station disclosed by Kawano in the synthesizer disclosed by Dean. The suggestion/motivation for doing so would have been to reduce the price and complexity of the system using only one synthesizer that outputs the received local signal and transmitted local signal (Kawano column 8 lines 50-62)

Regarding claim 24, Kawano, Dean and Sadler disclose claim 18, Sadler also discloses that the antenna is used in a portable telephone terminal that inherently will use an internal antenna (Sadler abstract). Kawano, Dean and Sadler are analogous art because they are from the same field of endeavor of wireless communications. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to incorporate in the system disclosed by Dean and Kawano the dipole antenna disclosed by Sadler. The suggestion/motivation for doing so would have been to use the system in a mobile terminal at a reduce cost (Sadler abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is 571-272-3119. The examiner can normally be reached on 8-6 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juan Alberto Torres
11-2-2007